

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 452 752 A3

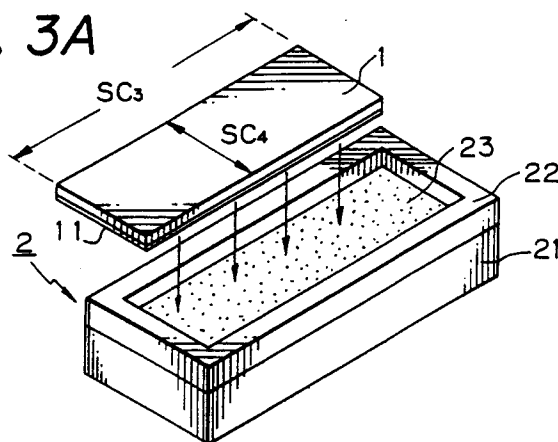
(12)

EUROPEAN PATENT APPLICATION(21) Application number: **91105449.2**(51) Int. Cl.⁵: **H01L 23/66, H01L 21/60**(22) Date of filing: **05.04.91**(30) Priority: **16.04.90 JP 99896/90**(43) Date of publication of application:
23.10.91 Bulletin 91/43(84) Designated Contracting States:
DE FR GB(88) Date of deferred publication of the search report:
15.04.92 Bulletin 92/16(71) Applicant: **FUJITSU LIMITED**
1015, Kamikodanaka Nakahara-ku
Kawasaki-shi Kanagawa 211(JP)(72) Inventor: **Kawai, Takahisa**
3-33-20, Shimokodanaka, Nakahara-ku
Kawasaki-shi, Kanagawa 211(JP)(74) Representative: **Seeger, Wolfgang, Dipl.-Phys.**
SEEGER & SEEGER Patentanwälte &
European Patent Attorneys
Georg-Hager-Strasse 40
W-8000 München 70(DE)(54) **Chip carrier for enabling production of high performance microwave semiconductor device by disposing semiconductor chip thereon.**

(57) A chip carrier (2) comprises a conductive holder (21) having a chip mounting portion (20), and an insulative collar member (22) having an inner portion.

The conductive holder (21) is used to mount a semiconductor chip (1) on the chip mounting portion (20). The shape of the inner portion of the insulative collar member (22) is suitable for an outer shape of the semiconductor chip (1). The insulative collar member (22), which is provided at the periphery of

the conductive holder (21), is used to position the semiconductor chip (1). Consequently, the handling of the semiconductor chip (1) having a feeble mechanical strength can be converted to the handling of the chip carrier (2) having a hard mechanical strength, so that the semiconductor chip (1) can be easily mounted on an exact portion of a surface of the package (4) without breaking the semiconductor chip (1).

Fig. 3A



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 91 10 5449

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y,1 A	FR-A-2 244 264 (NIPPON ELECTRIC COMPANY LTD.) (* page 10, line 26 - page 14, line 35; claims; figures 5,7-10 *) - - -	14-17,32 1-13, 18-31	H 01 L 23/66 H 01 L 21/60
Y,1 A	FR-A-2 324 164 (NIPPON ELECTRIC COMPANY LTD.) (* figures *) - - -	14-17,32 1-13, 18-31	
A	US-A-4 259 684 (DEAN ET AL.) * abstract; figures 1,2 * * column 3, line 26 - column 6, line 60 ** - - -	1-32	
A	US-A-4 546 478 (MATSUSHITA ELECTRIC IND. CO) - - -		
X Y,2	US-A-4 098 452 (GENERAL ELECTRIC COMPANY) (* column 5, line 67 - column 6, line 24; figure 4 *) - - -	33,34,36 39	
Y,2	PATENT ABSTRACTS OF JAPAN vol. 7, no. 229 (E-203)(1374) 12 October 1983 & JP-A-58 119 665 (HITACHI SEISAKUSHO K.K.) * abstract ** - - -	39	
A	EP-A-0 034 001 (AMP INCORPORATED) - - - - -		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 14 February 92	Examiner PROHASKA G.A.F.
<div><div>CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention</div><div>E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document</div></div>			